

NOTES AND EXTRACTS.

PRIZE FOR PRESSURE ANEMOMETER.

[Translated from the *Meteorologische Zeitschrift*, January, 1902.]

In order to obtain the best apparatus for measuring the pressure of the wind, competition is invited by all persons within and without Germany. The following prizes for the best devices will be awarded: First prize, 5,000 marks (about \$1,250); second prize, 3,000 marks (\$750); third prize, 2,000 marks (\$500). Moreover, the competitor whose apparatus shall after long continued observation be found to be most appropriate for official purposes will receive a further prize of 3,000 marks (\$750).

The designs of the apparatus (Entwürfe) must be received by April 15, 1903, at the Deutsche Seewarte in Hamburg. The programme can be obtained gratuitously from the geheime registratur D of the ministry of public works.

Signed by the minister of public works and also in the name of the secretary of state for the imperial marine, for the minister of war, for the minister of commerce and manufactures, for the central council of the union of Prussian steam engine inspectors, and for the union of German engineers.

REQUIREMENTS FOR THE COMPETITION RELATIVE TO AN APPARATUS FOR MEASURING THE PRESSURE OF THE WIND.

A. *Technical conditions.*

1. The pressure gage must be so arranged as to allow such a determination of the average force of wind pressure on surfaces and solids, including any possible suction that may be present on the leeward side, that the results of the observations can be utilized for static computations.

2. It is desired that the wind gage shall indicate with certainty the location of the measured average force [resultant?] relative to the surface.

3. The gage must make such an automatic registration of the pressure of the wind that there may be available a continuous graphic presentation of the changes of the wind pressure with the lapse of time.

4. It is especially to be noted that arrangements that determine the wind pressure indirectly by the measurement of the wind velocity do not correspond to the demands of this competition.

B. *Instructions for the competition.*

1. The competition is open to persons of all nationalities.

2. The competitor must deliver either a gage constructed according to his design or a working model, and with the latter, as explanatory thereto, the necessary drawings and computations. Both the apparatus and the models are to be sent by the competitors at their own cost and free from all other charges to the Deutsche Seewarte, Hamburg.

3. All competing apparatus must be received, with an assumed name or mark for identification, by or before April 1, 1903, at the Deutsche Seewarte in Hamburg which will carry out the testing of the gages. Designs coming later than this will not be considered. Separate from the designs of apparatus, there is to be sent a sealed envelope bearing the same assumed name or sign, and which must contain within (a) the address to which the competing apparatus can be returned or under which the sender can be communicated with; for foreign competitors there must be the address of some representative living in Germany. (b) A second sealed envelope containing the name of the sender. This envelope will only be opened in the case of the apparatus that receives a prize.

4. For the apparatus that best satisfies the conditions mentioned in section A, there will be awarded a first prize of 5,000 marks, a second prize of 3,000 marks, and a third prize

of 2,000 marks. Moreover, the competitor whose apparatus shall, after a long series of observations, prove to be the most appropriate for official use, will receive a further prize of 3,000 marks. But this successful competitor must, before this additional prize is paid to him, state how many pressure gages of this particular kind he is ready to deliver, at a price to be named by him, to all the officials and societies that offer the prize.

5. The successful designs become the property of the Deutsche Seewarte in Hamburg. The competitors are requested to protect themselves by securing patent rights on their designs before sending them in to the competition.

6. The results of the competition will be announced in the *Deutscher Reichs-Anzeiger*, the *Königlich Preussischer Staatsanzeiger*, and the *Centralblatt der Bauverwaltung*.

The details of the award will be published in the *Centralblatt der Bauverwaltung* and will moreover be sent to each prize winner.

The designs which do not receive prizes will, after the award of the prize committee, be returned to the given addresses.—C. A.

WEATHER BUREAU MEN AS INSTRUCTORS AND LECTURERS.

The following is from the *San Francisco Chronicle* of February 9, 1902:

"The phenomena of fogs" was the subject presented to a full lecture hall at the Mechanics' Library last night by Prof. Alexander G. McArdie, Forecast Official of this city. Fifty unusually beautiful photographic views of fog fields witnessed at different times from the summit of Mount Tamalpais, near the Golden Gate, were thrown upon a stereopticon screen and were said to be the finest picturesque fog effects ever taken with a camera anywhere. They were the result of the best of all the pictures made under Professor McArdie's direction during nearly three years. The lecturer explained how very deceptive sound waves became in a thick fog, and illustrated his point by a detailed reference to the loss a year ago of the steamship *Rio* and 130 lives. He distinguished between sea fogs of summer and tule fogs of winter, between the dust fog of the interior and the town fog such as London suffers from.

Mr. J. B. Marbury, Section Director, Atlanta, Ga., lectured before the Donald Frazier School for Boys at Decatur, Ga., on February 14. His subject was "Meteorology and forecasting," and among other points discussed were the following: The atmosphere and its functions; the relation of temperature to the development of storms; the method of making observations; the construction of the daily weather map; the making and distribution of weather forecasts; the development and progress of areas of high and low barometer in the United States.

Dr. W. M. Wilson, Section Director, Milwaukee, Wis., presented the work of the Weather Bureau in connection with agriculture before the Farmers' Institute at Barraboo, Wis., on the afternoon of February 18, and before the Institute at Lodi on the evening of the same day. He took occasion to expose the fallacy of many popular traditions with respect to the weather. He reports an urgent demand for the distribution of forecasts by means of the rural free delivery service.

Mr. P. H. Smyth, Observer, Cairo, Ill., lectured before the students and faculty of the Southern Illinois State Normal University, Carbondale, Ill., on February 18, his subject being "The general work of the Weather Bureau." He also addressed the physical geography class on "The movement of tropical cyclones," and the physics class on Weather Bureau instruments, the use of psychrometric tables, and the drawing of isobars and isotherms.

Mr. L. H. Murdock, Section Director, Salt Lake City, Utah, addressed the Polysophical Society of the Brigham Young

Academy, on "The Weather Bureau and its work," on the evening of February 21, illustrating his remarks by means of lantern slides.

Mr. J. Warren Smith, Section Director, Columbus, Ohio, visited the Farmers' Institute at Cridersville, Ohio, on February 28. At the morning session he delivered an address on "The work of the United States Weather Bureau and its relation to agriculture," in which he briefly outlined the general circulation of the atmosphere, the characteristics of the various atmospheric disturbances, both primary and secondary, the distinctive features of the three general cloud types, some phases of atmospheric electricity, and a brief history of the development of the observational work of the Weather Bureau.

At the afternoon session he again addressed the Institute, his subject being "Forecasts and warnings—how made, distributed, and utilized." The gradual expansion of the forecast system in the interest of the farmers, how best to profit by temperature forecasts and frost warnings, and methods of protection against frost, were among the subjects discussed.—H. H. K.

BACK NUMBERS OF THE REVIEW WANTED.

A correspondent wishes to obtain copies of the MONTHLY WEATHER REVIEW for February, 1884, and September, 1885, to complete his file. Volumes I to XIV, inclusive, and Volume XV, No. 2, are also desired to complete a set for a scientific library. Any one having these Reviews to dispose of will confer a favor by informing the Editor.

HOURLY TEMPERATURES FOR BALTIMORE, MD.

In the report for January, 1902, of the Maryland and Delaware section of the Climate and Crop Service, the Director, Dr. Oliver L. Fassig, states that a thermograph has been in use at the Baltimore office of the United States Weather Bureau since the first of January, 1893. From the record sheets of this instrument the average hourly values of temperature for each month have been computed for the nine years from 1893 to 1901. In the accompanying diagram, fig. 1, these values are graphically represented for the months of January, April, July, and October, and for the year as derived from the twelve monthly values. According to customary nomenclature the average temperature of any month is derived from the 24 hourly averages; we find for each month the following agreement between the averages for nine years of daily maximum and minimum temperatures, and of the 24 hourly observations:

January $\frac{(\text{max.} + \text{min.})}{2}$ — monthly average = $+0.3^{\circ}$

April " " " " = $+0.0^{\circ}$

July " " " " = -0.1°

October " " " " = $+0.4^{\circ}$

The difference between the averages of the 8 a. m. and 8 p. m. temperatures and the monthly averages are as follows:

January $\frac{8 \text{ a. m.} + 8 \text{ p. m.}}{2}$ — monthly averages = -1.1°

April " " " " = -0.8°

July " " " " = -0.7°

October " " " " = -1.6°

The mean annual temperature for each hour for the nine years of record is given in the following table:

	1	2	3	4	5	6	7	8	9	10	11	12	Average.
A. M.	51.8	51.1	50.5	50.0	49.5	49.4	50.1	51.7	53.6	55.6	57.4	59.0	55.0
P. M.	60.1	60.9	61.3	61.1	60.2	59.0	57.6	56.3	55.2	54.2	53.3	52.5	55.0

The periodic daily amplitude in temperature is the difference between the highest and lowest hourly means. The aperiodic daily amplitude is the difference between the means of the maximum and the minimum temperatures. The latter is always the larger, because the extremes of temperature rarely occur at the moment an hourly reading is taken.

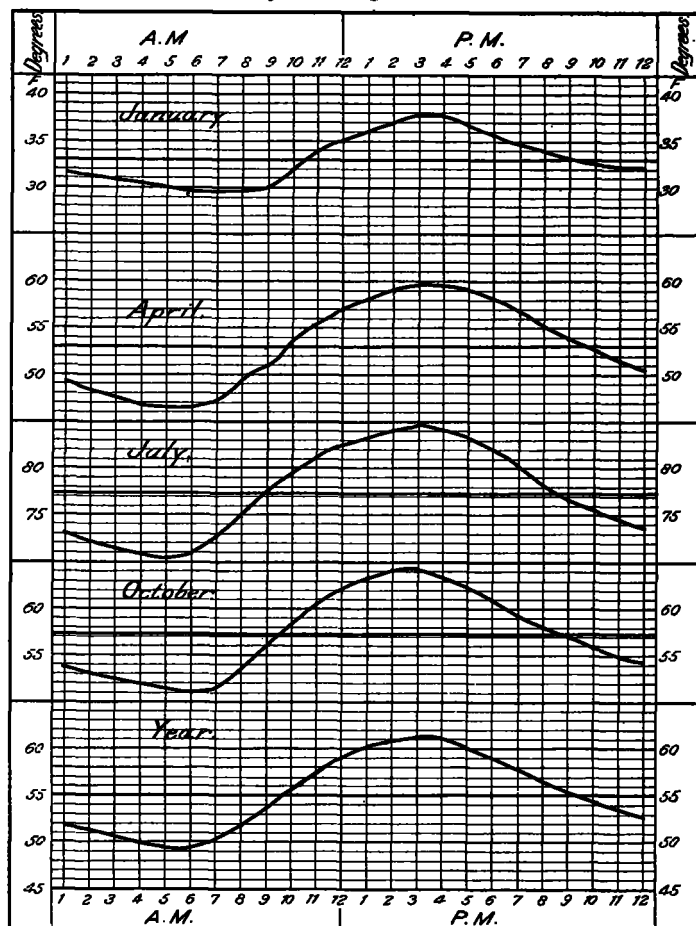


FIG. 1.—Average hourly temperature curves for Baltimore, Md., (1893-1901).

The following table shows the hours of occurrence of the periodic maximum, minimum, and mean temperatures for the different months and for the year.

Month.	Maxi- mum. P. M.	Mini- mum. A. M.	Mean.	
			A. M.	P. M.
January	3	7	11	10
February	3	7	11	10
March	3	6	10	10
April	3	6	10	10
May	3	5	9	9
June	3	5	9	9
July	3	5	9	9
August	3	5	9	9
September	3	6	9	9
October	3	6	10	9
November	3	7	10	9
December	3	7	10	9
Year	3	6	10	9

H. H. K.

METEOROLOGY AND THE SCHOOLS.

In his Report to the Secretary of Agriculture for the year ending June 30, 1901, the Chief of the Weather Bureau referred to the increasing demand for lectures and instructions by Weather Bureau officials before schools and colleges. That meteorology can be made an interesting study for the younger pupils as well as for the more advanced, is demon-